

Serial No.: 10/642,878

Applicant(s): Jagdeep Singh Sahota, et al.

Election in Response to Restriction Requirement and Preliminary Amendment

PRELIMINARY AMENDMENT

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims:

Claims 1-13 (Cancelled)

Claim 14 (Currently amended): A processor-implemented method of dynamically creating a verification value for a transaction, the method comprising:

creating, in response to the transaction involving a payment device, a base record comprising having a first data value and a second data value for a payment service being used in the transaction;

 splitting the base record into a first field and a second field;

 encrypting the first field using a first encryption key;

 performing an exclusive-OR (XOR) operation on the encrypted first field and the second field to produce a first result;

 encrypting the first result using a second encryption key to produce a second result;

 decrypting the second result using a decryption key to produce a third result;

 encrypting the third result using a third encryption key to produce a fourth result;

sequentially extracting each value between 0 and 9 from the most-significant digit to the least-significant digit of the fourth result to produce a fifth result;

sequentially extracting and subtracting hexadecimal A from each value between hexadecimal A and hexadecimal F from the most-significant digit to the least-significant digit of the fourth result to produce the sixth result;

concatenating the fifth result and the sixth result to produce a seventh result; and

selecting one or more values from the seventh result as ~~the a~~ card verification value for the transaction.

Claim 15 (Original): The method of claim 14 wherein the first encryption key, the second encryption key, and the third encryption key are equivalent.

Claim 16 (Original): The method of claim 14 wherein the decryption key differs from the first encryption key.

Claim 17 (Original): The method of claim 14 wherein the decryption key differs from each of the first encryption key, the second encryption key, and the third encryption key.

Claim 18 (Original): The method of claim 14 wherein the base record is 128-bits in length.

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Claim 19 (Original): The method of claim 14 wherein said first data value comprises: a primary account number for the payment service.

Claim 20 (Original): The method of claim 14 wherein said first data value comprises: a unique identification number for the payment device.

Claim 21 (Original): The method of claim 14 wherein said first data value comprises: a unique identification number for the service provider.

Claim 22 (Original): The method of claim 14 wherein said second data value comprises: an application transaction counter.

Claim 23 (Original): The method of claim 14 wherein said second data value comprises: a cryptogram.

Claim 24 (Original): The method of claim 14 wherein said second data value comprises: a digital signature.

Claim 25 (Original): The method of claim 14 wherein said second data value comprises: a value derived from the payment data.

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Claim 26 (Original): The method of claim 14 wherein said first verification value is derived from data further comprising:

a service code which identifies the payment service; and
an expiration date for the payment service.

Claim 27 (Original): The method of claim 14 wherein the base record further comprises padding characters to extend the base record to a predetermined length.

Claim 28 (Original): The method of claim 14 wherein the first encryption key, the second encryption key, the decryption key, and the third encryption key are derived from data residing on the payment device.

Claims 29-38 (Cancelled)

Claim 39 (New): A payment device comprising means for performing the method as defined in Claim 14.

Claim 40 (New): The payment device as defined in Claim 39, wherein the payment device is in the form of a card.

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Claim 41 (New): A point of sale terminal comprising:

means for communicating with the payment device; and

means for performing the method as defined in Claim 14.

Claim 42 (New): A computer readable medium comprising:

code for creating, in response to a transaction involving a payment device, a base record

having a first data value and a second data value;

code for splitting the base record into a first field and a second field;

code for encrypting the first field using a first encryption key;

code for performing an exclusive-OR (XOR) operation on the encrypted first field and
the second field to produce a first result;

code for encrypting the first result using a second encryption key to produce a second
result;

code for decrypting the second result using a decryption key to produce a third result;

code for encrypting the third result using a third encryption key to produce a fourth
result;

code for sequentially extracting each value between 0 and 9 from the most-significant
digit to the least-significant digit of the fourth result to produce a fifth result;

code for sequentially extracting and subtracting hexadecimal A from each value between
hexadecimal A and hexadecimal F from the most-significant digit to the least-significant digit of
the fourth result to produce the sixth result;

code for concatenating the fifth result and the sixth result to produce a seventh result; and

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code for selecting one or more values from the seventh result as a verification value for the transaction.

Claim 43 (New): A payment device comprising the computer readable medium as defined in Claim 42.

Claim 44 (New): The payment device as defined in Claim 43, further comprising means for deploying a payment service to pay for the transaction.

Claim 45 (New): The payment device as defined in Claim 44, wherein the verification value is for third party verification of the authenticity of the payment service deployed on the payment device when the payment service is utilized for the transaction.

Claim 45 (New): The payment device as defined in Claim 43 and selected from the group consisting of an integrated circuit card, a memory card, a point of sale terminal, a cellular telephone, a personal digital assistant, a mobile electronic device, and a computer.

Claim 46 (New): A system comprising:
means for creating, in response to a transaction involving a payment device, a base record having a first data value and a second data value;
means for splitting the base record into a first field and a second field;
means for encrypting the first field using a first encryption key;

means for performing an exclusive-OR (XOR) operation on the encrypted first field and the second field to produce a first result;

means for encrypting the first result using a second encryption key to produce a second result;

means for decrypting the second result using a decryption key to produce a third result;

means for encrypting the third result using a third encryption key to produce a fourth result;

means for sequentially extracting each value between 0 and 9 from the most-significant digit to the least-significant digit of the fourth result to produce a fifth result;

means for sequentially extracting and subtracting hexadecimal A from each value between hexadecimal A and hexadecimal F from the most-significant digit to the least-significant digit of the fourth result to produce the sixth result;

means for concatenating the fifth result and the sixth result to produce a seventh result;

and

means for selecting one or more values from the seventh result as a verification value for the transaction.

Claim 47 (New): A payment device comprising:

means for deploying a payment service for paying for the transaction; and
the system as defined in Claim 46.

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Claim 48 (New): A cellular telephone comprising the system as defined in Claim 46.

Claim 44 (New): A point of sale terminal comprising:

means for communicating with the payment device; and

the system as defined in Claim 43.